

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. After amending the claims as set forth above, claims 17-20 and 23-40 are now pending in this application.

Applicants wish to thank the Examiner for the careful consideration given to the claims.

Rejection of claims 17-24 and 27-34 based on Storey and Yasuda

Claims 17-24 and 27-34 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent 5,518,269 ("Storey") and U.S. Patent 6,337,461 ("Yasuda"). For at least the following reasons, this rejection is traversed.

Claim 17 recites, among other things, a method for producing a weakening zone on a component for deployment of an airbag device, comprising the steps of providing a textile surface structure for the component; and introducing a plurality of holes into threads of the textile surface structure to define the weakening zone. Spacing from hole center to hole center of adjacent holes in the textile surface structure differs from spacing from thread center to thread center of adjacent threads. The spacing from hole center to hole center of adjacent holes is 0.6 to 0.75 times the spacing from thread center to thread center of adjacent threads. Claim 17 is not rendered unpatentable over Storey and Yasuda because one of ordinary skill in the art would not combine the teachings of Storey and Yasuda to arrive at the invention of claim 17.

Storey discloses a vehicle airbag with a fabric portion 16 having a gas inlet opening 20, vent ports 26, and a dynamic vent 28. (Column 4, lines 45-61 of Storey.) The dynamic vent 28 comprises a section of fabric which is slightly permeable to generated gas at normal operating pressures. At a critical pressure which is above normal operating pressures, the flow of gas through the dynamic vent 28 at normal operating temperatures results in the melting and/or burning of the fabric of the dynamic vent 28 causing the dynamic vent 28 to open. The melting of the fabric of the dynamic vent 28 can be accomplished by reducing the strength or increasing the porosity of the dynamic vent 28 thereby making the fabric susceptible to degradation by melting. The strength of the fabric from which the dynamic vent 28 is made can be reduced by creating microholes or micropores 34 in the fabric. The

presence of the micropores 34, therefore, makes the fabric of the dynamic vent 28 more susceptible to degradation by high temperature gases such that the dynamic vent 28 will burn through. The burned through dynamic vent 28 provides additional exhaust vents through which the generated gas can exit the airbag cushion 12, thus relieving pressure from within the airbag cushion 12. (Column 4, line 62 to column 5, line 23 of Storey.) The micropores are made with laser energy. (Column 5, lines 24-28 of Storey.) The intended use in Storey requires the textile to remain at a strength even after creating the micropores that will avoid breaking because otherwise the airbag would collapse. In other words, the micropores of Storey are designed to create openings that are enlarged through melting caused by high temperature gases. Even if mechanical weakness of the dynamic vent 28 of Storey might result from laser treatment that is not the intent in Storey and such weakness would have to be kept to a minimum to prevent full rupture.

In contrast, Yasuda relates to laser scoring of a trim piece that includes a rigid polypropylene substrate, a foamed polypropylene intermediate layer, and an ABS/PVC composite. (Column 3, lines 47-50 of Yasuda.) Yasuda discloses making microperforations so as to provide a line of mechanical weakness in the trim piece so as to allow deployment of an airbag. (Column 1, lines 60-67 of Yasuda.) Yasuda does not teach pre-weakening of textile material. Consequently, it does not teach any relationship between the spacing of hole centers and the spacing of thread centers.

There is no motivation to modify Storey in view of a reference (Yasuda) that allegedly teaches how to create mechanical weakness to a material. Storey is not directed to creating mechanical weakness, but instead, is directed to creating holes of a size that are conducive to degradation by high temperatures. Yasuda teaches nothing in this regard. Given the different applications of Storey and Yasuda, the use of the microperforations of Yasuda as the micropores in the dynamic vent of Storey is tantamount to changing the function of the microperforations of Yasuda from creating a section in a trim piece for succumbing to the force of a deploying airbag to creating a section in a fabric designed to succumb to high temperature gases by melting, as disclosed by Storey. Such a combination is non-obvious. MPEP 2143 provides that a rejection based on a rationale of combining prior art elements according to known methods to yield predictable results cannot be maintained if each element in the combination does not merely perform the same function as it does separately. Because

the function of the microperforations of Yasuda changes in the combination, such a modification is not obvious and a rejection based on the modification is improper. Accordingly, the proposed combination of Storey and Yasuda is improper, and claim 17 is allowable.

Even assuming *arguendo* that one skilled in the art would have been interested in modifying the mechanical weakness in Storey (a point that Applicants contest), they would not have looked to Yasuda. Yasuda teaches nothing about reducing mechanical weakness in a textile. The PTO asserts that “[i]t would have been obvious...to use a known successful method of forming tear lines in a material, such as forming microperforations every 0.2-5.0mm as taught by Yasuda et al., into the method of Storey et al. because such a modification would have been within his technical grasp.” (Pages 3-4 of the Office Action.) This rejection is improper because the requirements for creating a section in trim pieces for succumbing to the force of a deploying airbag (as disclosed in Yasuda) is completely different from creating a section in a fabric designed to succumb to high temperature gases by melting. The materials are different (a three layered trim piece versus a fabric portion of an airbag) and the mechanisms for breakage are different (impaction by external object verses melting). The two teachings relate to entirely different applications. One of ordinary skill in the art would not consider the teachings of Yasuda to be applicable to the teachings of Storey given their different applications.

It should also be noted that one of ordinary skill in the art would not look to the disclosure of Storey to arrive at the invention of claim 17. The goal of the micropores of Storey (making the fabric susceptible to degradation by melting) is quite different from the goal of the technology of claim 17 which leads to **break-section** in the textile of a component which is used for airbag deployment. The strength of the textile needs to be sufficient to bear the forces of common use but, in case of an accident, the pre-weakened zone needs to break reliably and with predictable speed. Because one of ordinary skill in the art would not understand the micropores of Storey to be applicable to the field of components for the deployment of an airbag device, such as for example a trim part, one would not use the teachings of Storey to arrive at the invention of claim 17. Thus, claim 17 is allowable.

Claim 30 recites, among other things, a method for producing a vehicle component having an airbag exit flap comprising the steps of: providing a foam layer and a textile surface

structure; introducing a plurality of holes into the foam layer by applying laser treatment; and introducing a plurality of holes into threads of the textile surface structure by applying laser treatment. Spacing from hole center to hole center of adjacent holes in the textile surface structure differs from spacing from thread center to thread center of adjacent threads. The spacing from hole center to hole center of adjacent holes is 0.6 to 0.75 times the spacing from thread center to thread center of adjacent threads.

Claim 30 is not rendered unpatentable over Storey and Yasuda because one of ordinary skill in the art would not combine the teachings of Storey and Yasuda to arrive at the invention of claim 30. As previously mentioned, there is no motivation to modify Storey in view of a reference (Yasuda) that allegedly teaches how to create mechanical weakness to a material because Storey is not directed to creating mechanical weakness, but instead, is directed to creating holes of a size that are conducive to degradation by high temperatures. Also, even assuming *arguendo* that one skilled in the art would have been interested in modifying the mechanical weakness in Storey (a point that Applicants contest), they would not have looked to Yasuda because Yasuda teaches nothing about reducing mechanical weakness in a textile. Given the different applications of Storey and Yasuda, the use of the microperforations of Yasuda as the micropores in the dynamic vent of Storey is tantamount to changing the function of the microperforations of Yasuda from creating a section in a trim piece for succumbing to the force of a deploying airbag to creating a section in a fabric designed to succumb to high temperature gases by melting, as disclosed by Storey. Such a combination is non-obvious. Accordingly, the proposed combination of Storey and Yasuda is improper, and claim 30 is allowable.

Claims 21-22 have been canceled, which renders the rejection of these claims moot.

Claims 18-20, 23-24, 27-29, and 31-34 depend from and contain all the features of claim 17 or 30, and are allowable for the same reasons indicated above, without regard to the further patentable features contained therein.

For example, in regard to claim 28, it is noted that the PTO states that “Storey discloses a process for preweakening a section of a vehicle interior component in the form of a seat (Fig. 8).” (Page 5 of the Office Action.) It is respectfully asserted that Storey does not teach such a preweakening. Figs. 8-10 of Storey merely discloses the deployment of an airbag with vent holes in which the airbag is disposed within a vehicle seat. Storey does not

disclose anything regarding a preweakening a section of the vehicle seat 52. Thus, claim 28 is allowable for this additional reason.

For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Rejection of claims 17, 24-26, and 35-40 based on Bauer, Storey, Yasuda, and Gray

Claims 17, 24-26, and 35-40 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent Application Publication 2001/0010423 (“Bauer”), Storey, Yasuda, and U.S. Patent Application Publication 2002/0153710 (“Gray”). For at least the following reasons, this rejection is traversed.

Claim 17 recites, among other things, a method for producing a weakening zone on a component for deployment of an airbag device, comprising the steps of providing a textile surface structure for the component; and introducing a plurality of holes into threads of the textile surface structure to define the weakening zone. Spacing from hole center to hole center of adjacent holes in the textile surface structure differs from spacing from thread center to thread center of adjacent threads. The spacing from hole center to hole center of adjacent holes is 0.6 to 0.75 times the spacing from thread center to thread center of adjacent threads.

Claim 17 is not rendered unpatentable over Bauer, Storey, Yasuda, and Gray because one of ordinary skill in the art would not combine the teachings of these references to arrive at the invention of claim 17. Bauer concerns the cutting and scoring of covers for automotive trim pieces enclosing airbag safety. However, Bauer does not teach or suggest that the spacing from hole center to hole center of adjacent holes in the textile surface structure differs from spacing from thread center to thread center of adjacent threads and that the spacing from hole center to hole center of adjacent holes is 0.6 to 0.75 times the spacing from thread center to thread center of adjacent threads. The claimed spacings in claim 17 (i.e., the specific distance between the hole centers relative to the distance of the thread centers) ensures that a large number of successive laser treatments in the thread are not rendered ineffective by coinciding with thread interspaces, thus preventing the weakening of the textile surface structure. In contrast, Bauer merely discloses the laser scoring of a textile layer 92 to form a groove (Fig. 13 and paragraph 0094 of Bauer) and a series of round perforations 124 in a cover 128 (Fig. 17 and paragraph 0103 of Bauer). However, the cover 128 is not specified to

be a textile layer. Furthermore, no dimensions related to the spacing of the threads relative to the holes is provided in Bauer that would lead to the claimed spacings recited in claim 17. Thus, claim 17 is allowable over Bauer.

Storey and Yasuda do not cure the deficiencies of Bauer. As previously mentioned, there is no motivation to modify Storey in view of a reference (Yasuda) that allegedly teaches how to create mechanical weakness to a material because Storey is not directed to creating mechanical weakness, but instead, is directed to creating holes of a size that are conducive to degradation by high temperatures. Also, even assuming *arguendo* that one skilled in the art would have been interested in modifying the mechanical weakness in Storey (a point that Applicants contest), they would not have looked to Yasuda because Yasuda teaches nothing about reducing mechanical weakness in a textile. Given the different applications of Storey and Yasuda, the use of the microperforations of Yasuda as the micropores in the dynamic vent of Storey is tantamount to changing the function of the microperforations of Yasuda from creating a section in a trim piece for succumbing to the force of a deploying airbag to creating a section in a fabric designed to succumb to high temperature gases by melting, as disclosed by Storey. By the same token, the use of the micropores of Storey as the tear points in the trim part of Bauer is tantamount to changing the function of the micropores of Storey from creating a section of fabric for an airbag designed to succumb to high temperature gases by melting to creating a section in a trim piece for succumbing to the force of a deploying airbag, as disclosed in Bauer and Yasuda. Because the function of the microperforations of Yasuda or the function of the micropores of Storey changes in the combination, such a modification is not obvious and a rejection based on the modification is improper. Accordingly, the proposed combination of Bauer, Storey and Yasuda is improper.

Gray does not cure the deficiencies of Bauer, Storey, and Yasuda. Indeed, Gray does not disclose laser scoring of textile but just relates to pre-weakening of homogenous material. As a result, Gray does not teach or suggest wherein spacing from hole center to hole center of adjacent holes in the textile surface structure differs from spacing from thread center to thread center of adjacent threads, and wherein the spacing from hole center to hole center of adjacent holes is 0.6 to 0.75 times the spacing from thread center to thread center of adjacent threads. Accordingly, claim 17 is allowable.

Claim 35 recites, among other things, a method for producing a vehicle trim component having an airbag exit flap comprising the steps of: providing a foam layer, a textile surface structure, and a supporting element; introducing a plurality of holes to the supporting element; joining the foam layer to the textile surface structure; introducing a plurality of holes to the foam layer by applying laser treatment, then; introducing a plurality of holes to threads of the textile surface structure by applying laser treatment; and laminating the foam layer and the textile surface structure to the supporting element so that the holes in the foam layer, textile surface structure, and supporting element substantially coincide. Spacing from hole center to hole center of adjacent holes in the textile surface structure differs from spacing from thread center to thread center of adjacent threads. The spacing from hole center to hole center of adjacent holes is 0.6 to 0.75 times the spacing from thread center to thread center of adjacent threads.

Claim 35 is not rendered unpatentable over Bauer, Storey, Yasuda, and Gray because one of ordinary skill in the art would not combine the teachings of these references to arrive at the invention of claim 35. As previously mentioned, Bauer and Gray do not teach or suggest that the spacing from hole center to hole center of adjacent holes in the textile surface structure differs from spacing from thread center to thread center of adjacent threads and that the spacing from hole center to hole center of adjacent holes is 0.6 to 0.75 times the spacing from thread center to thread center of adjacent threads. Also, there is no motivation to modify Storey in view of a reference (Yasuda) that allegedly teaches how to create mechanical weakness to a material because Storey is not directed to creating mechanical weakness, but instead, is directed to creating holes of a size that are conducive to degradation by high temperatures. Also, even assuming *arguendo* that one skilled in the art would have been interested in modifying the mechanical weakness in Storey (a point that Applicants contest), they would not have looked to Yasuda because Yasuda teaches nothing about reducing mechanical weakness in a textile. Given the different applications of Storey and Yasuda, the use of the microperforations of Yasuda as the micropores in the dynamic vent of Storey is tantamount to changing the function of the microperforations of Yasuda from creating a section in a trim piece for succumbing to the force of a deploying airbag to creating a section in a fabric designed to succumb to high temperature gases by melting, as disclosed by Storey. By the same token, the use of the micropores of Storey as the tear points in the trim part of

Bauer is tantamount to changing the function of the micropores of Storey from creating a section of fabric for an airbag designed to succumb to high temperature gases by melting to creating a section in a trim piece for succumbing to the force of a deploying airbag, as disclosed in Bauer and Yasuda. Because the function of the microperforations of Yasuda or the function of the micropores of Storey changes in the combination, such a modification is not obvious and a rejection based on the modification is improper. Accordingly, claim 35 is allowable.

Claim 39 recites, among other things, a method for producing a weakening zone on a component for deployment of an airbag device, the method comprising: providing a textile surface structure for the component; and introducing a plurality of holes into threads of the textile surface structure to define the weakening zone. The holes are introduced at an angle with respect to a surface of the textile surface structure. The angle is between about 20 degrees and 45 degrees.

Claim 39 is not rendered unpatentable over Bauer, Storey, Yasuda, and Gray because one of ordinary skill in the art would not combine the teachings of these references to arrive at the invention of claim 39. As previously mentioned, there is no motivation to modify Storey in view of a reference (Yasuda) that allegedly teaches how to create mechanical weakness to a material because Storey is not directed to creating mechanical weakness, but instead, is directed to creating holes of a size that are conducive to degradation by high temperatures. Also, even assuming *arguendo* that one skilled in the art would have been interested in modifying the mechanical weakness in Storey (a point that Applicants contest), they would not have looked to Yasuda because Yasuda teaches nothing about reducing mechanical weakness in a textile. Given the different applications of Storey and Yasuda, the use of the microperforations of Yasuda as the micropores in the dynamic vent of Storey is tantamount to changing the function of the microperforations of Yasuda from creating a section in a trim piece for succumbing to the force of a deploying airbag to creating a section in a fabric designed to succumb to high temperature gases by melting, as disclosed in Storey. By the same token, the use of the micropores of Storey as the tear points in the trim part of Bauer is tantamount to changing the function of the micropores of Storey from creating a section of fabric for an airbag designed to succumb to high temperature gases by melting to creating a section in a trim piece for succumbing to the force of a deploying airbag, as

disclosed in Bauer and Yasuda. Because the function of the microperforations of Yasuda or the function of the micropores of Storey changes in the combination, such a modification is not obvious and a rejection based on the modification is improper. Accordingly, claim 39 is allowable.

Claims 24-26, 36-38, and 40 depend from and contain all the features of claim 17, 35, or 39 and are allowable for the same reasons indicated above, without regard to the further patentable features contained therein.

For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Rejection of claim 29 based on Bauer, Storey, Yasuda, Gray, and Kim

Claim 29 is rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Bauer, Storey, Yasuda, Gray, and U.S. Patent Application Publication 2002/0047252 ("Kim"). For at least following reasons, this rejection is traversed.

Claim 29 depends from and contains all the features of claim 17. As previously mentioned, Bauer and Gray do not teach or suggest that the spacing from hole center to hole center of adjacent holes in the textile surface structure differs from spacing from thread center to thread center of adjacent threads and that the spacing from hole center to hole center of adjacent holes is 0.6 to 0.75 times the spacing from thread center to thread center of adjacent threads. Also, there is no motivation to modify Storey in view of a reference (Yasuda) that allegedly teaches how to create mechanical weakness to a material because Storey is not directed to creating mechanical weakness, but instead, is directed to creating holes of a size that are conducive to degradation by high temperatures. Also, even assuming *arguendo* that one skilled in the art would have been interested in modifying the mechanical weakness in Storey (a point that Applicants contest), they would not have looked to Yasuda because Yasuda teaches nothing about reducing mechanical weakness in a textile. Given the different applications of Storey and Yasuda, the use of the microperforations of Yasuda as the micropores in the dynamic vent of Storey is tantamount to changing the function of the microperforations of Yasuda from creating a section in a trim piece for succumbing to the force of a deploying airbag to creating a section in a fabric designed to succumb to high temperature gases by melting, as disclosed in Storey. By the same token, the use of the

micropores of Storey as the tear points in the trim part of Bauer is tantamount to changing the function of the micropores of Storey from creating a section of fabric for an airbag designed to succumb to high temperature gases by melting to creating a section in a trim piece for succumbing to the force of a deploying airbag, as disclosed in Bauer and Yasuda. Because the function of the microperforations of Yasuda or the function of the micropores of Storey changes in the combination, such a modification is not obvious and a rejection based on the modification is improper. Kim does not cure these deficiencies. Accordingly, claim 17 and its dependent claim 29 are allowable.

For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Rejection of claims 30-32 and 34 based on Bauer, Storey, and Yasuda

Claims 30-32 and 34 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Bauer, Storey, and Yasuda. For at least the following reasons, this rejection is traversed.

Claim 30 recites, among other things, a method for producing a vehicle component having an airbag exit flap comprising the steps of: providing a foam layer and a textile surface structure; introducing a plurality of holes into the foam layer by applying laser treatment; and introducing a plurality of holes into threads of the textile surface structure by applying laser treatment. Spacing from hole center to hole center of adjacent holes in the textile surface structure differs from spacing from thread center to thread center of adjacent threads. The spacing from hole center to hole center of adjacent holes is 0.6 to 0.75 times the spacing from thread center to thread center of adjacent threads.

Claim 30 is not rendered unpatentable over Bauer, Storey, and Yasuda because one of ordinary skill in the art would not combine the teachings of these references to arrive at the invention of claim 30. As previously mentioned, Bauer does not teach or suggest that the spacing from hole center to hole center of adjacent holes in the textile surface structure differs from spacing from thread center to thread center of adjacent threads and that the spacing from hole center to hole center of adjacent holes is 0.6 to 0.75 times the spacing from thread center to thread center of adjacent threads. Also, there is no motivation to modify Storey in view of a reference (Yasuda) that allegedly teaches how to create mechanical weakness to a material

because Storey is not directed to creating mechanical weakness, but instead, is directed to creating holes of a size that are conducive to degradation by high temperatures. Also, even assuming *arguendo* that one skilled in the art would have been interested in modifying the mechanical weakness in Storey (a point that Applicants contest), they would not have looked to Yasuda because Yasuda teaches nothing about reducing mechanical weakness in a textile. Given the different applications of Storey and Yasuda, the use of the microperforations of Yasuda as the micropores in the dynamic vent of Storey is tantamount to changing the function of the microperforations of Yasuda from creating a section in a trim piece for succumbing to the force of a deploying airbag to creating a section in a fabric designed to succumb to high temperature gases by melting, as disclosed in Storey. By the same token, the use of the micropores of Storey as the tear points in the trim part of Bauer is tantamount to changing the function of the micropores of Storey from creating a section of fabric for an airbag designed to succumb to high temperature gases by melting to creating a section in a trim piece for succumbing to the force of a deploying airbag, as disclosed in Bauer and Yasuda. Because the function of the microperforations of Yasuda or the function of the micropores of Storey changes in the combination, such a modification is not obvious and a rejection based on the modification is improper. Accordingly, claim 30 is allowable.

Claims 31-32 and 34 depend from and contain all the features of claim 30, and are allowable for the same reasons indicated above, without regard to the further patentable features contained therein.

For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Rejection of claim 33 based on Bauer, Storey, Yasuda, and Gray

Claim 33 is rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Bauer, Storey, Yasuda, and Gray. Claim 33 depends from and contains all the features of claim 30. As previously mentioned, claim 30 is not rendered unpatentable over Bauer, Storey, and Yasuda because one of ordinary skill in the art would not combine the teachings of these references to arrive at the invention of claim 30. Gray does not cure the deficiencies of Bauer, Storey, and Yasuda. Indeed, Gray does not disclose laser scoring of textile material but just relates to pre-weakening of homogenous material. Thus, claim 30 and its dependent

claim 33 is allowable. For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 4/5/2010

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 295-4075
Facsimile: (202) 672-5399

By Matthew J. Kremer

Matthew J. Kremer
Attorney for Applicants
Registration No. 58,671